FY 2010 National Water Program End of Year Performance by Subobjective

The following chapters provide a summary of the progress made toward accomplishing environmental and program goals for each subobjective described in the FY 2010 *National Water Program Guidance*. Each subobjective chapter includes the following information:

- A brief summary of overall performance in 2010 and the previous four years for measures under each subobjective.
- A description of performance highlights, including what commitments were met and what factors contributed to success.
- A description of management challenges, if appropriate, identifying key factors that led to measures not being met and next steps to improve performance for the future.

Each subobjective section focuses primarily on measures with FY 2010 commitments. Indicator measures are discussed where trends significantly differ from previous year's results. Annual Commitment System (ACS) measure codes are provided in the text in parentheses.

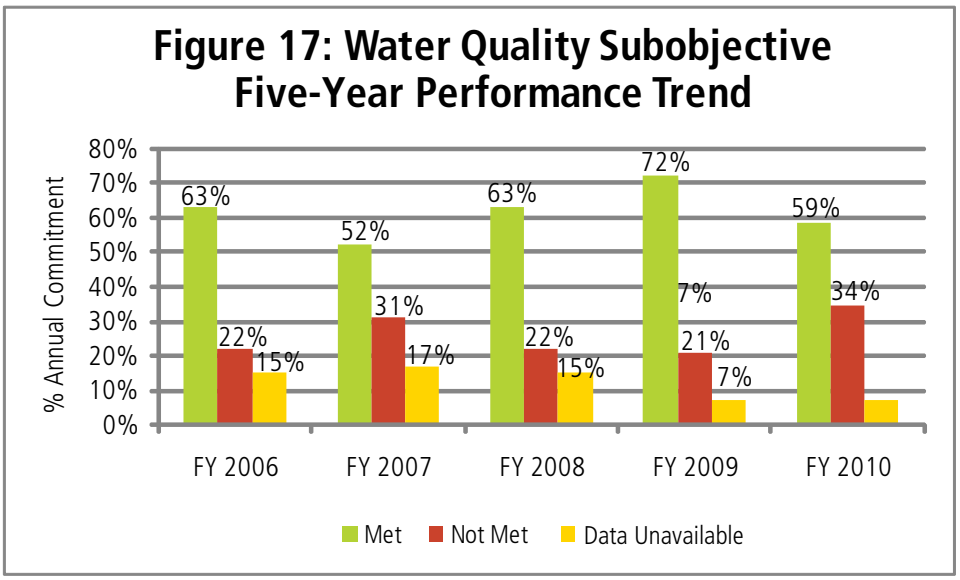
Key for Reading Performance Measure Charts and Tables

For all charts with national trend results, commitments are reflected by trend lines and results by vertical bars. For charts with regional FY 2010 results, a dotted line indicates the national FY 2010 commitment for that particular measure. Although regions use the national commitment as a point of reference in setting their annual commitments, regional commitments may vary based on different conditions. Green bars in both national and regional charts identify commitments met, and red bars identify measures not met.

For the measure summary tables in each subobjective chapter, a green "up" arrow means that a measure met its FY 2010 commitment, and a red "down" arrow indicates that the annual commitment was not met. The letter "I" means that the measure is an indicator measure and did not have an annual commitment for FY 2010. Measures without data or not reporting in FY 2010 are indicated by "Data Unavailable." An "LT" symbol notes that the measure has a long-term goal and does not have an annual commitment. A gold star (★) in the past trends column highlights that the measure has met its annual commitment 100% of the time over the past four or five years. And finally, the appendix number represents the page in Appendix D (D-00) on the website where additional details about the measure can be found, and the figure number is the number of the chart in the chapter.

Subobjective: Water Quality

EPA and states met 59% of their commitments under the Water Quality subobjective in FY 2010, fell short on 34%, and data were not available for 7%. The percentage of commitments met dropped in FY 2010 after three years of steady increase. The number of measures with commitments that were not met in FY 2010 (34%) was above 2009 (21%), and the percent of measures with data unavailable did not change. (Figure 17)



FY 2010 ACS Code	Measure Description	Met/Not Met (I = Indicator) (Data Unavailable = No Data/Not Reporting) (LT = Long-Term Target)	Past Trends/ # of Years Met	Appendix Page Number (D-0)/ Figure Number
Subobjective 2.2.1 Water Quality				
SP-10	Formerly impaired waterbodies now meeting standards	▲	5/5 ★	D-13/Fig. 18
SP-11	Remove causes of waterbody impairment	▼	2/3	D-13
SP-12	Improve water quality w/ watershed approach	▲	3/3	D-13
SP-13	Ensure wadeable stream conditions	LT		D-14
SP-14	Show improvement in tribal waters	LT		D-14
SP-15	Reduce tribal households lacking sanitation	▼	2/5	D-14/Fig. 50
WQ-1a	States/territories adopted nutrient criteria	▼	1/4	D-15/Fig. 23
WQ-1b	States/territories on schedule to adopt nutrient criteria	▲	3/5	D-15
WQ-2	Tribes water quality standards approved	▼	1/5	D-16/Fig. 52
WQ-3a	States/territories with updated water quality criteria	▲	2/4	D-16/Fig. 21
WQ-3b	Tribes with updated water quality criteria	▲	4/4 ★	D-17
WQ-4a	States/territories water quality standards revisions approved	▲	5/5 ★	D-17/Fig. 25
WQ-4b	Tribes water quality standards revisions approved	▲	5/5 ★	D-17
WQ-5	States/territories adopted monitoring strategies	▼	2/5	D-18/Fig. 27
WQ-6a	Tribes implementing monitoring strategies	▼	3/4	D-18/Fig. 53
WQ-6b	Tribes providing water quality data	▲	4/4 ★	D-19
WQ-7	States/territories using Assessment Database (ADB)	▼	4/5	D-19
WQ-8a	Total TMDLs	▲	5/5 ★	D-20
WQ-8b	TMDLs developed by states	▼	4/5	D-20/Fig. 29
WQ-9a	Nitrogen reduction	▲	2/4	D-21
WQ-9b	Phosphorus reduction	▼	1/2	D-21
WQ-9c	Sediment reduction	▲	2/2	D-21
WQ-10	NPS-impaired waterbodies restored	▲	3/4	D-22/Fig. 37
WQ-12a	Nontribal NPDES permits current	▲	4/5	D-23/Fig. 31
WQ-12b	Tribal permits current	▲	1/5	D-24
WQ-13a	Facilities covered by MS-4 permit	I		D-24

FY 2010 ACS Code	Measure Description	Met/Not Met (I = Indicator) (Data Unavailable = No Data/Not Reporting) (LT = Long-Term Target)	Past Trends/ # of Years Met	D-22Appendix Page Number (D-0)/ Figure Number
Subobjective 2.2.1 Water Quality (Continued)				
WQ-13c	Facilities covered by construction storm water permit	I		D-25
WQ-13d	Facilities covered by CAFO permit	I		D-25
WQ-14a	POTWs SIUs control mechanisms in place	▲	2/4	D-26
WQ-14b	POTWs CIUs control mechanisms in place	I		D-26
WQ-15a	Percent major dischargers in SNC	Data Unavailable	0/2	D-27
WQ-15b	Major Dischargers on impaired waters in SNC	I		D-27
WQ-16	POTWs comply wastewater discharge standards	Data Unavailable	2/2	D-28
WQ-17	CWSRF Fund utilization rate	▲	5/5 ★	D-28/Fig. 35
WQ-19a	High priority state NPDES permits	▲	5/5 ★	D-29
WQ-19b	High priority EPA NPDES permits	▲	3/5	D-29/Fig. 33
WQ-20	Facilities providing trading	I		D-30
WQ-21	Impaired segments restoration planning complete	I		D-30

Notes: NPS = nonpoint source; CAFO = concentrated animal feeding operation; POTW = publicly owned treatment works; SIU = significant industrial user; CIU =categorical industrial user; SNC = significant noncompliance; CWSRF = Clean Water State Revolving Fund.

FY 2010 Performance Highlights and Management Challenges

Attaining Water Quality Standards in Impaired Waters. The Agency continues to make progress in ensuring that water quality standards are fully attained in waterbodies listed as impaired. At the end of 2010, a cumulative 2,909 of the waters listed as impaired in 2002 met standards for all the impairments identified, thus exceeding the FY 2010 commitment of 2,809[1] (SP-10) (Figure 18). Out of a universe of 39,503 waterbodies, 7% were achieving attainment by the end of FY 2010. Nine of 10 EPA regions met their 2010 commitments (Figure 19). The Agency has achieved 89% of its FY 2014 goal of 3,250 waterbodies (Figure 20).

Figure 18: Waterbodies Meeting Water Quality Standards by Fiscal Year (SP-10)

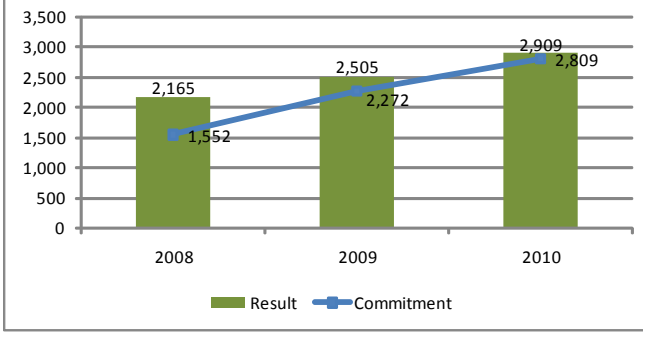
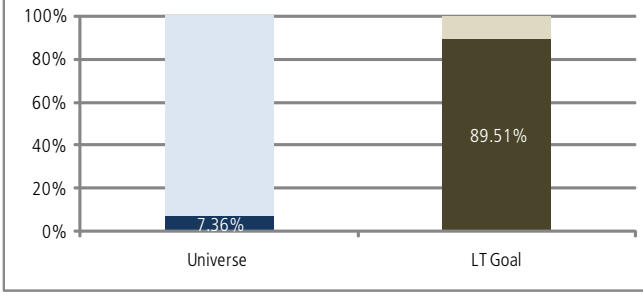


Figure 19: Number of Waterbodies Now Meeting Standards by Region (SP-10)

Figure 20: Percent of Universe and Toward Long-Term Goal (SP-10)



At the end of the year, EPA and states had removed 8,446 specific causes of waterbody impairments that states had identified in 2002 (SP-11). EPA fell short of meeting its FY 2010 commitment of removing 8,512 causes of waterbody impairments, primarily because of a delay in reviewing Integrated Reports (IRs) from states.

EPA and states were successful in improving water quality conditions in 168 impaired watersheds nationwide cumulatively through 2010 using the watershed approach (SP-12). This was a significant increase over the 2009 result of 104 improved watersheds nationwide. Multiple years of targeted effort came to fruition in FY 2010, resulting in the annual goal being exceeded. EPA and states are now at the stage where longer term projects in a number of the regions are showing measurable results. Most of the easier watersheds that were closest to the criteria indicating incremental improvement have been counted, however, leaving the more complicated watershed restoration projects that take longer to produce quantitative results. Maintaining this exceptional pace may be hampered in upcoming years due to state budget restrictions.

[1] Information for this commitment is based on CWA 305(b) reports submitted by states on a biannual basis. To some extent, EPA exceeded its commitment for this measure due to receiving late FY 2008 and timely FY 2010 Integrated Reports (IRs).

Water Quality Criteria and Standards. Water quality standards are the regulatory and scientific foundation of water quality protection programs under the Clean Water Act (CWA). Under the CWA, states, territories, and authorized tribes establish water quality standards that define the designated uses and water quality criteria to protect those uses for waters within their jurisdictions. The standards are used to determine which waters must be cleaned up, how much may be discharged, and what is needed for protection.

For the second year in a row, states and territories met regional commitments for submitting new or revised water quality criteria acceptable to EPA that reflect new scientific information (WQ-3a) (Figure 21). The FY 2010 result of 38 states and territories (66%) was above the national goal of 37 (59%). Nine of 10 regions met their commitments (Figure 22).

Figure 21: States/Territories Submitted Water Quality Criteria by Fiscal Year (WQ-3a)

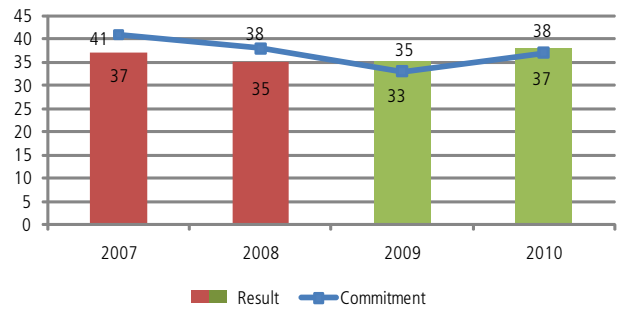
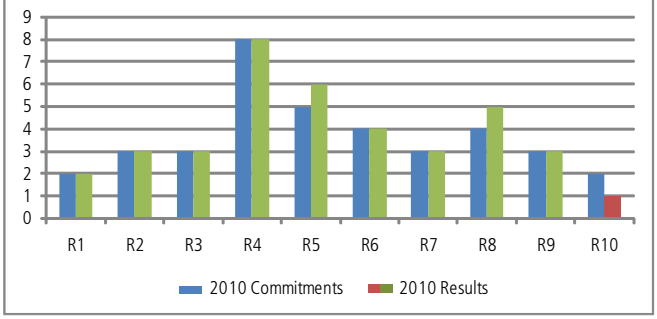


Figure 22: States/Territories Submitted Water Quality Criteria by Region (WQ-3a)



In 2010, 32 states and territories were on schedule with a mutually agreed upon plan to incorporate nutrient criteria into their water quality standards (commitment = 32, results = 32) (WQ-1b). EPA continues to place a high priority on state adoption of numeric criteria for nitrogen and phosphorus pollution, while also encouraging states to take action to reduce loadings of these pollutants while they develop their numeric criteria. For example, a policy memorandum issued in March 2011, "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions," encourages states to develop watershed scale plans for targeting adoption of the most effective agricultural practices and other appropriate loading-reducing measures in areas where they are most needed while they develop numeric nutrient criteria and related schedules. In addition, EPA's Office of Inspector General (OIG) evaluated the effectiveness of EPA's strategy to determine what improvements EPA can make to accelerate progress. The OIG recommended that EPA establish better metrics to gauge the actual progress made by the states. In response, EPA has adopted new measures in FY 2011 for tracking state progress in developing numeric nutrient criteria.[1]

As of 2010, 12 states and territories have adopted water quality criteria for nitrogen and phosphorus pollution, which is just below the national target of 13 (WQ-1a) (Figure 23). There was a similar pattern in 2009, and progress has been slow over the past few years for this measure, in part because of the scientific complexity of such criteria and programmatic and policy challenges. Six of seven regions met their commitments for this measure in 2010 (Figure 24).

[1] EPA Needs to Accelerate Adoption of Numeric Nutrient Water Quality Standards, Report No. 09-P-0223, August 26, 2009, http://www.epa.gov/oig/reports/2009/20090826-09-P-0223.pdf. See definitions of FY 2011 measures WQ-1a, 1b, and 1c at http://water.epa.gov/aboutow/goals_objectives/waterplan/def_wq11.cfm#WQ-1.

Figure 23: States/Territories Adopted Nutrient Criteria by Fiscal Year (WQ-1a)

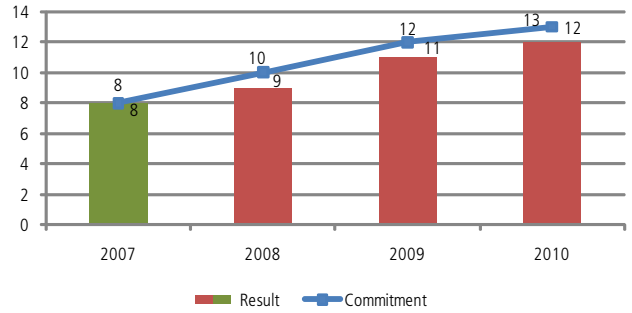
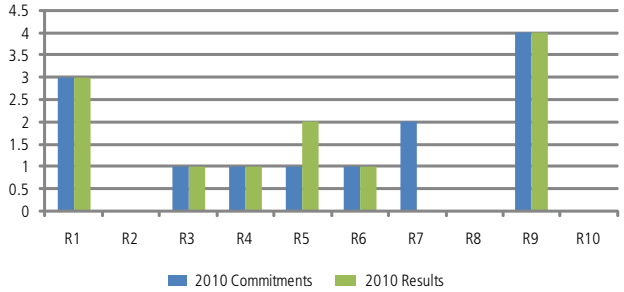


Figure 24: States/Territories Adopted Nutrient Criteria by Region (WQ-1a)



EPA exceeded its FY 2010 national commitment (85%) by approving 91% of water quality standard revisions submitted by states and territories (WQ-4a) (Figure 25). Nine of 10 regions met their commitments for this measure (Figure 26). EPA attributes at least some of this success to working with states and territories early in their standards development process to help them submit standards that EPA can approve.

Figure 25: States/Territories Water Quality Standards Submissions by Fiscal Year (WQ-4a)

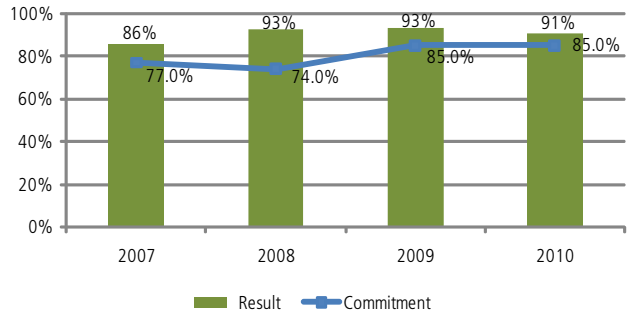
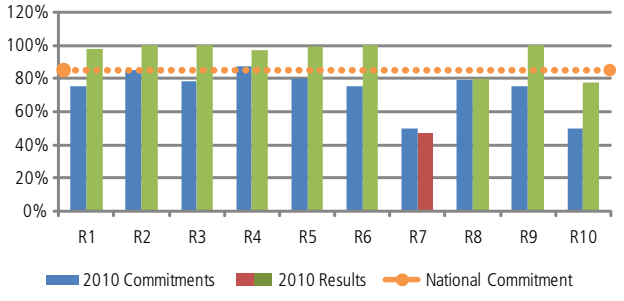


Figure 26: States/Territories Water Quality Standards Submissions by Region (WQ-4a)



Water Quality Monitoring. Throughout FY 2010, EPA continued to work with states, tribes, interstate agencies, and territories to strengthen their monitoring programs. As part of this effort, EPA works with its partners to amass scientifically valid data needed by resource managers to make informed water quality protection and restoration decisions at both national and state levels. Moreover, high-quality data collected over time is essential to track changes and identify potential trends. Due to the sheer size of the undertaking, traditional monitoring approaches are only able to target a small number of waterbodies within a state (typically 20–40%)—falling short of the CWA mandate to assess all waters. Both EPA and the states recognize a need for a greater integration of the various water monitoring approaches in an effort to better understand water quality across spatial, ecoregional, and geographic scales.

One approach to monitoring that EPA is promoting is conducting probabilistic surveys. EPA, states, tribes, and other partners are making progress toward the goal of monitoring all water types nationwide in a statistically valid manner. Statistical surveys are a cost-effective and scientifically credible means to assess and report on the current status of a water resource and, over time, changes and trends for that water resource. Initiated in 2005, the National Aquatic Resources Surveys (NARS) program relies on EPA and state/tribal collective efforts to conduct annual surveys of a specific waterbody type (streams, rivers, lakes, coasts/estuaries, or wetlands) and repeats each survey on a five-year cycle. At the end of FY 2011, EPA and the states/tribes will have completed the first full rotation of the program, thus having surveyed 100% of the nation's waters.

The number of states and territories implementing comprehensive monitoring strategies in keeping with established schedules declined in FY 2010 (WQ-5) (Figure 27). This was due to the Virgin Islands (VI) falling significantly behind in implementing its monitoring strategy and consequently not being able to expend past years' supplemental monitoring funds. The VI is currently under a Corrective Action Plan (CAP) that seeks to address and remedy these shortfalls. Nine of 10 regions met their commitments for this measure in FY 2010 (Figure 28)

Figure 27: States/Territories Adopted Monitoring Strategies by Fiscal Year (WQ-5)

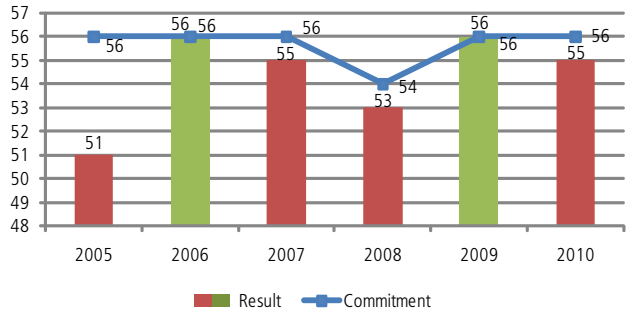


Figure 28: States/Territories Adopted Monitoring Strategies by Region (WQ-5)

The number of states providing electronic information for integrated reporting of water quality assessment data dropped from 45 to 44 in FY 2010 (WQ-7). Long-standing issues with assessment database submissions from two states in Region 3 were not resolved. Discussions are continuing, with hopes to resolve the issues prior to the next reporting cycle in 2012.

Total Maximum Daily Loads (TMDLs). Development of TMDLs for an impaired waterbody is a critical step in meeting water restoration goals. TMDLs focus on clearly defined environmental goals and establish a pollutant budget, which is then implemented via permit requirements or watershed plans through local, state, and federal programs. In 2010, 2,262 TMDLs[1] were developed by states and approved by EPA (WQ-8b) (Figure 29). This was just short of the national commitment of 2,491. Six of 10 regions met their commitments for this measure (WQ-8b) (Figure 30). EPA also tracks the pace of TMDL development, which refers to the annual number of TMDLs needed to be consistent with national policy. The national policy recommends that TMDLs be established and approved within eight to 13 years of the water having been listed as impaired under CWA Section 303(d). The national 2010 end of year pace was 147%, which exceeded the commitment of 77% (WQ-8a). The program exceeded its commitment primarily because EPA developed an estimated 2,600 TMDLs for Pennsylvania due to state budget cuts and layoffs that impacted the state's ability to develop TMDLs.

Figure 29: State Developed TMDLs by Fiscal Year (WQ-8b)

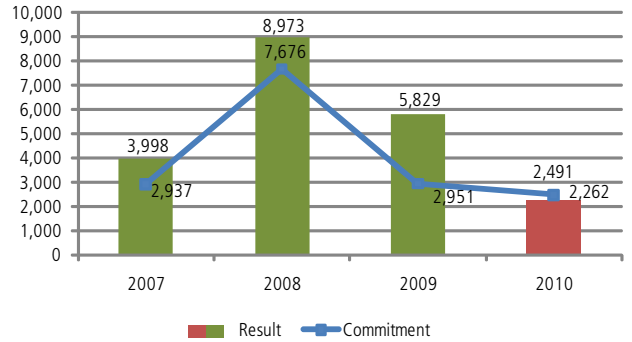
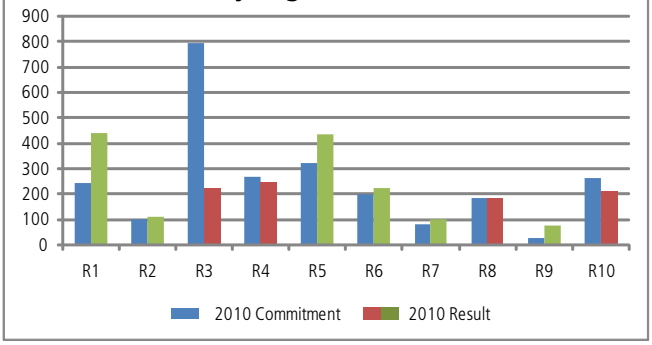


Figure 30: State Developed TMDLs by Region (WQ-8b)



[1] A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.

National Pollutant Discharge Elimination System (NPDES) Permit Program. The NPDES program requires all point sources discharging into U.S. waterbodies to be covered by state or EPA NPDES permits and for publicly owned treatment works (POTWs) to have pretreatment programs to control contributions from industrial facilities to sewage treatment plants. For the fourth year in a row, EPA and states achieved the national goal of having current NPDES permits in place for 89.4% of facilities (108,755 non-tribal facilities), exceeding the national commitment of 89% (104,623 non-tribal facilities) (WQ-12a) (Figure 31). Six of 10 regions met or exceeded their commitments in 2010 (Figure 32). This was a slight decrease over 2009, when seven of 10 regions exceeded their 2009 commitments.

Figure 31: Non-Tribal NPDES Permits Current by Fiscal Year (WQ-12a)

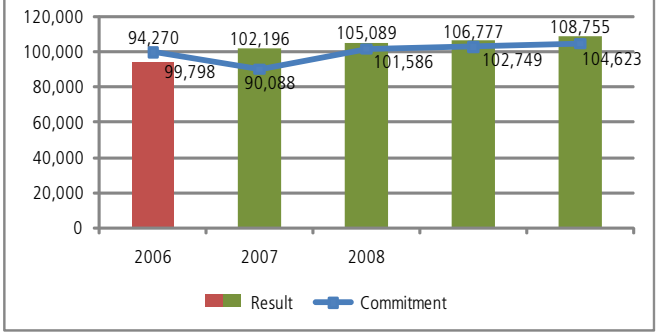
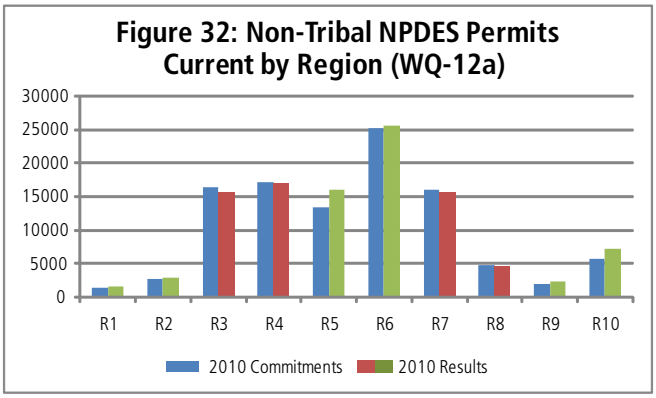


Figure 32: Non-Tribal NPDES Permits Current by Region (WQ-12a)



EPA has been working with states to structure the permit program to better support comprehensive protection of water quality on a watershed basis. A key strategy is to focus efforts on high-priority permits that need to be issued or reissued to help implement TMDLs, watershed plans, effluent guidelines, or other environmental and programmatic actions. In 2010, both EPA and authorized states issued 1,097 priority permits (144% of the universe), exceeding the national commitment of 792 permits (95%) (WQ-19b) (Figure 33). EPA and authorized states have exceeded their commitments (seven of 10 regions met their commitments in 2010) for issuing high-priority permits for the past five years.[2] States have continued their efforts in coordination with EPA regions to maintain strong performance in the issuance of their high-priority permits (Figure 34).

Figure 33: High Priority NPDES Permits by Fiscal Year (WQ-19b)

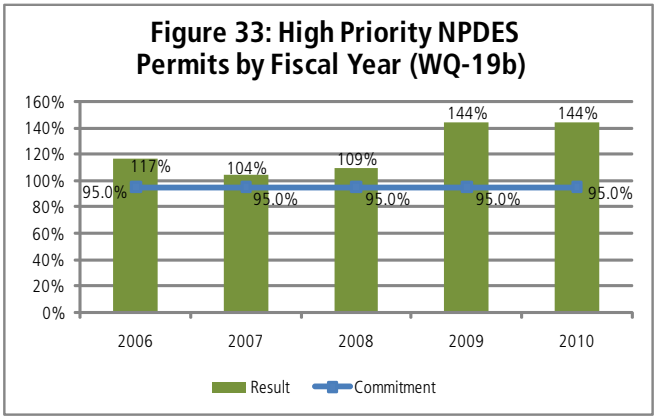
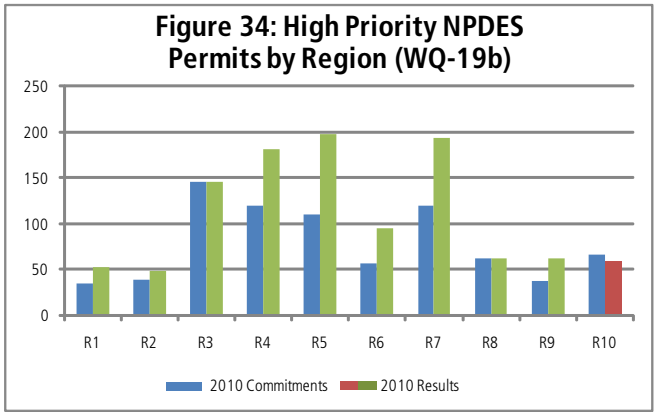
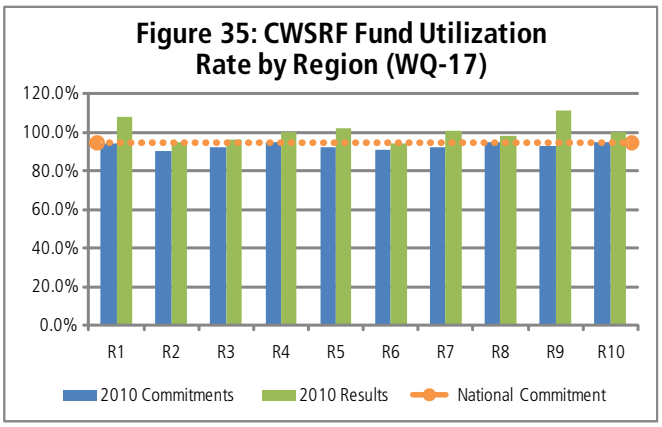


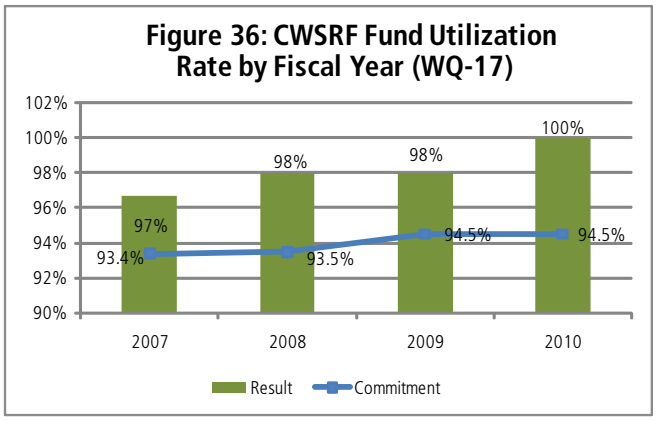
Figure 34: High Priority NPDES Permits by Region (WQ-19b)



[4] When states establish their lists each year, they designate priority permits to be issued within the fiscal year, as well as for two successive years. If a state is able to issue permits designated for a future fiscal year ahead of schedule, it receives credit toward the current fiscal year target, which might result in more permits being issued than originally targeted. In order to simplify the process and to be more transparent, EPA developed a new policy for FY 2010 for developing the priority permits universe. In addition, EPA shifted the time period for locking down the priority permits universe to align with the Government Performance and Results Act (GPRA) commitment schedule.

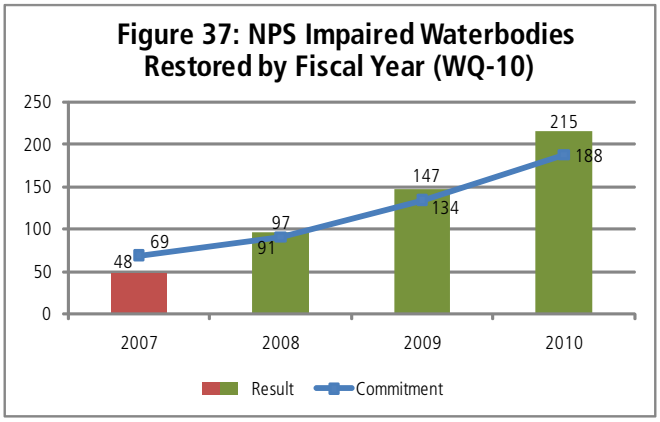
Clean Water Financing. The Clean Water State Revolving Funds (CWSRFs) provide low-interest loans to local governments to help finance wastewater treatment facilities and other water quality projects. The CWSRF utilization rate hit 100% for the first time in 2010. All 10 regions met their commitments for this measure (Figure 35). Of the $75.2 billion in funds available for projects through 2010, $73.6 billion have been committed to more than 24,400 loans. In 2010, project assistance reached $4.8 billion, which funded 1,780 loans in a single year. Nationally, since 2001, fund utilization has remained relatively stable and strong at over 90% (WQ-17) (Figure 36). Demand for CWSRF funding was much greater than in previous years given the possibility for communities to receive a portion (or all) of their project funding as additional subsidization in the form of principal forgiveness, grants, and negative interest. This increased demand included communities that have not previously come to the CWSRF for project funding.

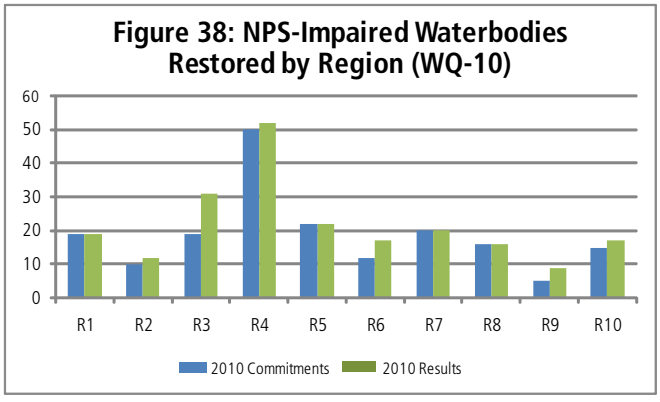




(Numbers reflect base program only and do not include ARRA funded projects)

Control Nonpoint Source Pollution. Polluted runoff from sources such as agricultural lands, forestry sites, and urban areas is the largest single remaining cause of water pollution. EPA and states are working with local governments, watershed groups, property owners, tribes, and others to implement programs and management practices to control polluted runoff throughout the country. EPA and states made significant gains in FY 2010 in documenting the full or partial restoration of waterbodies that are primarily nonpoint source impaired. Nationally, EPA exceeded its FY 2010 commitment (188) with 215 waterbodies that were partially or fully restored (against a universe of 5,967 waterbodies) (WQ-10) (Figure 37).[1] All 10 regions met their annual commitments (Figure 38).





[1] EPA continues to highlight nonpoint source success stories on its website at http://www.epa.gov/owow/nps/Success319/.

EPA and states increased their output by 46% from 2009 and almost 1500% over the baseline year in 2002 (Figure 39). Contributing factors to EPA's FY 2010 results include: 1) the maturation of projects that have been developed and implemented over a period of years and 2) communication among regions, local watershed organizations, conservation districts, and state government to identify areas where restoration projects have been implemented or that have a watershed plan in place that may have resulted in water quality improvements.

Figure 39: Percent Above Baseline (WQ-40)